

# Peninsula Energy Ltd.

(PEN-ASX: A\$0.17)

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**BUY**

Target: A\$0.55 (from A\$0.50)

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## Management Upbeat That Technical Turnaround Nears

PEN-AU	New	Last
Rating	--	Buy
Target (A\$)	\$0.55 ▲	0.50
Projected Return	224% ▲	62%
Target/NAV multiple	--	0.90x
Corporate DCF (US\$)	0.41 ▼	0.47
Cash & Investments (US\$)	0.10 ▲	0.05
Debt (US\$)	(0.12) ▲	(0.11)
Exploration/Unmodelled Resources (US\$)	0.08 ▲	0.07
Total NAV (US\$)	0.47 ▲	0.46
P/NAV	0.37x ▼	0.46x

Company Data		
Last Price		\$0.17
52-week Range	\$0.17 -	\$0.45
Market Cap (\$MM)		\$42
Enterprise Value (\$MM)		\$63
Shares Outstanding - Basic (MM)		245.0
Shares Outstanding - FD (MM)		312.3
Avg Volume - 100d (000 shares/day)		270.6
Cash (\$MM)		\$4.89
Debt (\$MM)		\$26.02
Working Capital (\$MM)		(\$17.67)

Forecast	2016A	2017A	2018A	LT
Spot (US\$/lb)	33	23	29	60
Term (US\$/lb)	44	32	34	60
Realized Prices (US\$/lb)	64	68	47	
Revenue (US\$MM)	5.8	37.4	13.2	
EPS	(\$0.03)	(\$0.53)	(\$0.01)	
P/E	n/a	n/a	n/a	
EBITDA (\$MM)	(\$3.9)	(\$89.7)	\$2.7	
EV/EBITDA	n/a	n/a	23.4x	
Interest Coverage	n/a	n/a	n/a	
OP CF (\$MM)	(\$6.5)	(\$3.3)	\$18.9	
CF/share	(\$0.0)	(\$0.0)	\$0.1	
P/CF	n/a	n/a	n/a	
Capex (\$MM)	(\$49.0)	(\$14.2)	(\$15.9)	
FCF (\$MM)	(\$55.5)	\$0.0	\$0.0	
FCF Yield	n/a	n/a	n/a	

All Figures in A\$ Unless Otherwise Noted

Source: FactSet, Company Reports, Eight Capital

### PEN-ASX: Price/Volume Chart



Source: Factset

### Company Description

Peninsula Energy is an ASX listed uranium producer with assets in Wyoming (USA), and Karoo, South Africa. Peninsula is primarily focused on ramping up its 100% owned Lance ISR project by switching to low pH leaching typical of international ISR production, rather than using alkali leaching like its US peers.

We recommend Peninsula Energy with a BUY and raise our target slightly to A\$0.55/sh after rolling our 10% DCF model forward to 2020. While the December quarter operational update was released on 14-Jan-19, we look past current production rates, towards the technical field studies underway. While many other uranium companies have been reducing production to match higher priced contracts in this challenging market, Peninsula has been struggling to get its production up to design rates for technical reasons. A benefit from the 53.9 MM lbs U3O8 in resources hosted at Lance, the largest ISR mine in the US, is that it has no shortage of contracts. So this wasn't a blessing in disguise by dropping production rates. PEN has 6.5 MM lbs U3O8 under contract, including 2.34 MM lbs due over the next five years. A weighted average delivery price of \$54/lb for projected revenue of \$420MM. Sixty four percent of deliveries are binding. There are plans to buy 225,000 lbs at \$25/lb by 2020. We believe it to be Peninsula's best interest to get that material out of the ground, even in this price environment. The main steps to achieving desired production rates are to test and permit a new process. Management believes using a low pH (acid) is the fix that it needs and was granted regulatory approval to begin running field tests in November 2018. We are cautiously optimistic that PEN can overcome its technical issues and take advantage of an industry-leading contract book. That said, it has been three years since start-up, so we will need further evidence over the next 60-90 days that things are moving in the right direction. Lance has the potential to stage production at 1.15 MM lbs, 2.3 MM lbs and 3.0 MM lbs per year starting in Q3/CY19 (Q1/FY20).

- **Q4/18 production was 20,364 lbs U3O8**, 9% lower than the bottom end of its 22,500-27,500 lb guidance, impacted by a nine day shutdown for repairs and head grade decline in aging wellfields. Sales were 100,000 lbs (85% production, 15% purchased) for revenue of US\$4.5 MM.
- **FY19 production guidance unchanged** at 90,000-110,000 lbs U3O8. Mar-19 and Jun-19 quarters are forecast to produce 15,000 to 20,000 lbs each.
- **Cheaper five year toll milling agreement signed** in Dec-18. PEN ships U3O8-bearing resin to Irigaray ISR plant owned by Uranium One (Private), where it is eluted, precipitated, filtered, dried and drummed.

**Moving from bicarbonate leach to acid leach** ISR system to help improve recoveries at its Lance project in WY appears to be off to a good start. Technically, acid use should be easier than alkali. Gypsum is a valid concern for all ISR projects, but less of a concern for Lance due to its lower calcium content....even with an increase in solubility using acid. While there is no guarantee that it will be approved, there are no regulations against using acid leach. WDEQ now being in charge of Federal licensing is a huge positive from many angles, including attention, cost, confidence, and timing.

- **Gypsum creation must be managed by all ISR projects.** Calcium converts to gypsum in the wellfield, potentially reducing porosity and permeability. There is a lot more gypsum experience globally, as over half of world uranium production now uses acid leach (Kazakhstan, Australia). This wasn't the case in 1970s when acid was first tried in the US.
- **Lance hosts little calcium in the formation**, <2% CaCO3 which is perfect for low pH. Because of this, PEN does not expect to leach much calcium. In

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turn, leaching solutions are not expected to come anywhere near calcium sulphate saturation limits which would cause gypsum precipitation. Lance rocks are Cretaceous in age, much like Kazakh rocks, and unlike higher Ca Tertiary rocks in Powder River Basin where alkali fluids are being used.

- **Many benefits to low pH.** Acid leach is much more aggressive than alkali leach. Its higher solubility means higher recoveries are expected, up to 90-98% vs. 60-70% with alkali solutions in the lab. Also expect increased flow rates. While not a problem, extra acidity should decrease the gumming up of the filters in the wells. Management believes this can be up to four times better than before, but flow rate increase is not incorporated into economic studies. Improved economics should be due to higher flow rates, higher recoveries, lower number or wider spacing of wells (lower Capex and Opex).

**Field trials designed to address technical risks** (if not already addressed in the lab). 3-4 patterns in low pH will be tested with a hope to tackle any potential issues at pilot level. This will impact a small footprint by using an existing set of Mine Unit 1 patterns that have been 50% mined via ISR to date. Mods are being made to plant/header houses to make suitable for low pH chemistry. The trials will take several months, including about one month to do one pore volume, and two months to get pH down. Test work will use existing resins in the ion exchange plant, although not perfectly tailored for use with acid, as they will be loading uranyl sulphate rather uranyl carbonate. But it will do for now. Back end toll milling elution chemistry is virtually identical to plan.

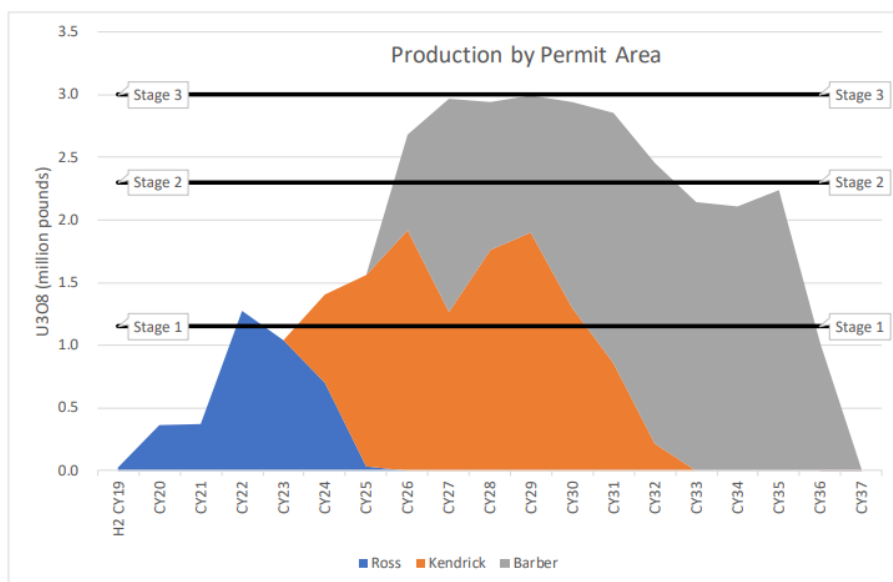
**Regulatory approvals anticipated in CY1/19 by management.** The WDEQ now in charge of Source Material License as of 1-Oct-19 (no longer the NRC) and management believes it has met technical review requirements. WDEQ's Permit to Mine review is also done, moving into public comment period.

**Table 1: Outline of the Lance's low pH FS three-stage expansion plan. A total of 33.4 MM lbs U3O8 is scheduled for mining over 17 years. The LOM all-in sales costs estimate is \$31.77/lb, including \$15.59/lb operating and wellfield costs. A recent toll milling agreement renewal might help drop costs further.**

Stage	Year	Expansion CAPEX	Production Cost \$/lb.	AISC \$/lb.	Capacity mlbs/yr
Stage 1	2019	\$5.3m	\$14.67	\$40.58	1.15
Stage 2	2024	\$43.1m	\$8.93	\$31.52	2.3
Stage 3	2026	\$70.3m	\$9.16	\$30.36	3.0

Source: Company Reports

**Figure 1: LOM production profile for the Lance ISR Mine based on the low pH FS.**



Source: Company Reports

<b>Peninsula Energy Ltd.</b>					
Rating	BUY	A\$ Target	\$0.55	Shares O/S (MM)	245.0
		A\$ Close	\$0.18	Fully Diluted Shares (MM)	312.3
David A. Talbot, Director, Mining Research		12-month return	214%	Basic Mkt. Capitalization (\$MM)	A\$ 41.64
<a href="mailto:dtalbot@eightcapital.com">dtalbot@eightcapital.com</a>				Enterprise Value (\$MM)	A\$ 62.77

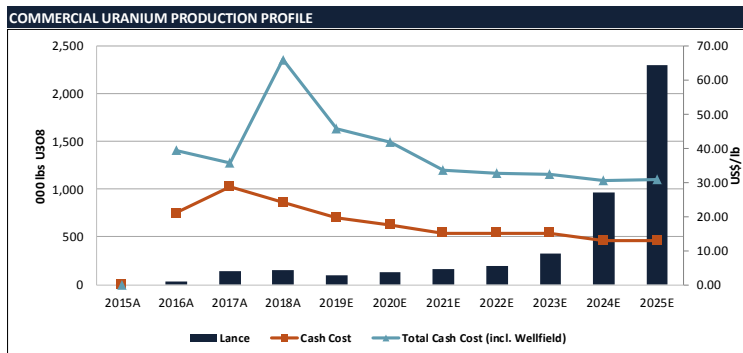
PRODUCTION ESTIMATES (000 lbs)					
Year-end June	2016A	2017E	2018E	2019E	2020E
Lance	38	145	155	96	128
<b>TOTAL</b>	<b>38</b>	<b>145</b>	<b>155</b>	<b>96</b>	<b>128</b>

TOTAL CASH COST ESTIMATES (excl. non-cash, incl. wellfield expenditures) (US\$/lb)					
Year-end June	2016A	2017E	2018E	2019E	2020E
Lance	39.5	35.6	66.0	45.8	41.7
<b>Wt. Avg. Total Cash Costs</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>39.5</b>	<b>35.6</b>

URANIUM RESERVES & RESOURCES					
	Ownership	Tonnes MM t	Grade % U3O8	Cont U3O8 (MM lbs) 100% Basis	PEN Share
<b>Proven and Probable Reserves</b>					
Ross	100%	--	--	--	--
Kendrick	100%	--	--	--	--
Barber	100%	--	--	--	--
Karoo	74%	--	--	--	--
<b>Total Reserves</b>		<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00</b>
<b>Measured and Indicated Resources</b>					
Ross	100%	8.65	0.05%	9.93	9.93
Kendrick	100%	4.39	0.05%	4.82	4.82
Barber	100%	2.64	0.04%	2.41	2.41
Karoo	74%	8.00	0.12%	21.90	16.21
<b>Total Measured and Indicated Resources</b>		<b>23.68</b>	<b>0.07%</b>	<b>39.06</b>	<b>33.37</b>
<b>Inferred Resources</b>					
Ross	100%	1.15	0.05%	1.25	1.25
Kendrick	100%	23.83	0.05%	24.80	24.80
Barber	100%	10.50	0.05%	10.46	10.46
Karoo	74%	15.30	0.10%	35.00	25.90
<b>Total Inferred Resources</b>		<b>50.78</b>	<b>0.06%</b>	<b>71.51</b>	<b>62.41</b>
<b>TOTAL RESOURCES</b>		<b>74.45</b>	<b>0.07%</b>	<b>110.57</b>	<b>95.78</b>
<b>Current Per Pound Metrics</b>					
EV/lb (US\$)		\$1.06	1.87	-43%	
Mkt Cap/lb (US\$)		\$0.93	1.46	-36%	

NET ASSET VALUE (US\$) - 10%	NAV (US\$ MM)	US\$/Share	% NAV
<b>Assets:</b>			
Lance (100%)	102.8	0.44	96%
Un-mined Resources	18.2	0.08	17%
<b>Balance Sheet &amp; Other Items:</b>			
Cash & Investments	22.1	0.10	21%
Debt	(26.9)	-0.12	-25%
Exploration, G&A, and Other	-8.5	-0.04	-8%
<b>Total</b>	<b>108</b>	<b>0.47</b>	<b>100%</b>
<b>Eight Capital DCF Target Multiple</b>		<b>0.90x</b>	
<b>Share Price Target</b>	A\$	<b>0.55</b>	

Long Term Uranium Price Assumption (US\$/lb)					
NAV (US\$/share)	40	50	60	70	80
0% Discount	0.65	1.04	1.43	1.81	2.20
5% Discount	0.42	0.68	0.94	1.21	1.47
10% Discount	0.28	0.46	0.64	0.83	1.01
15% Discount	0.19	0.32	0.45	0.58	0.71



BALANCE SHEET (US\$ MM)				
Year-end June	2016A	2017A	2018A	2019E
<b>Assets:</b>				
Cash & ST Investments	3.76	9.62	11.96	22.06
Other Current Assets	5.89	6.54	9.12	9.12
<b>Current Assets</b>	<b>9.65</b>	<b>16.16</b>	<b>21.08</b>	<b>31.18</b>
Mineral Properties	29.10	17.33	4.21	41.05
Other non-current Assets	122.04	85.96	85.96	85.96
<b>Total Assets</b>	<b>160.79</b>	<b>119.45</b>	<b>111.25</b>	<b>158.19</b>
<b>Liabilities:</b>				
Current Liabilities	22.34	25.76	19.80	4.12
Long-term Debt	0.69	1.08	10.40	26.90
Other non-current Liabilities	5.23	13.13	0.36	4.37
<b>Total Liabilities</b>	<b>28.27</b>	<b>39.97</b>	<b>30.56</b>	<b>35.38</b>
Capital Stock	187.31	204.07	205.10	239.42
Retained Earnings	(54.8)	(124.6)	(124.4)	(116.6)
<b>Total Shareholder Equity</b>	<b>132.52</b>	<b>79.48</b>	<b>80.69</b>	<b>122.80</b>

INCOME STATEMENT (US\$ MM)				
Year-end June	2016A	2017A	2018A	2019E
Total Revenue:	5.8	37.4	13.2	26.6
% Uranium	100%	49%	100%	100%
% Other	0%	51%	0%	0%
Operating Costs	3.1	19.9	17.0	1.9
G&A	3.8	3.6	3.6	3.6
Exploration	0.0	1.4	0.0	0.0
Depreciation	0.2	0.2	0.2	0.2
Other	1.6	76.9	(9.4)	8.0
<b>EBITDA</b>	<b>(2.8)</b>	<b>(64.4)</b>	<b>1.9</b>	<b>13.1</b>
<b>EBIT</b>	<b>(3.0)</b>	<b>(64.6)</b>	<b>1.7</b>	<b>12.9</b>
Interest Expense	(0.6)	(3.7)	(2.9)	(1.8)
<b>EBT</b>	<b>(3.5)</b>	<b>(68.3)</b>	<b>(1.2)</b>	<b>11.1</b>
Taxes	0.0	0.0	0.0	(3.3)
Equity Earnings	0.0	-6.8	0.0	0.0
Other	0	0	0	0
<b>Net Income (Reported)</b>	<b>(3.5)</b>	<b>(75.1)</b>	<b>(1.2)</b>	<b>7.8</b>
<b>Net Income (Adjusted)</b>	<b>(3.5)</b>	<b>(75.1)</b>	<b>(1.2)</b>	<b>7.8</b>
<b>EPS (Reported) \$/sh</b>	<b>(0.02)</b>	<b>(0.38)</b>	<b>(0.01)</b>	<b>0.03</b>
<b>EPS (Adjusted) \$/sh</b>	<b>(0.02)</b>	<b>(0.38)</b>	<b>(0.01)</b>	<b>0.03</b>
Average Shares (MM)	176.4	197.0	231.3	231.3

CASH FLOW STATEMENT (US\$ MM)				
Year-end June	2016A	2017A	2018A	2019E
Net Income (Reported)	(3.5)	(75.1)	(1.2)	7.8
Depreciation	(0.2)	(0.2)	(0.2)	(0.2)
Working Capital Changes	0.0	0.0	0.0	0.0
Other	(1.0)	73.0	14.9	0.3
<b>Operating Cash Flow</b>	<b>(4.7)</b>	<b>(2.4)</b>	<b>13.6</b>	<b>8.0</b>
<b>Operating Cash Flow/sh (\$/sh)</b>	<b>-0.03</b>	<b>-0.01</b>	<b>0.06</b>	<b>0.03</b>
Capital Expenditures	(35.1)	(10.2)	(11.4)	(37.0)
Acquisitions	(0.0)	0.0	0.0	0.0
Other	(0.3)	(0.9)	5.0	0.0
<b>Investing Cash Flow</b>	<b>(35.5)</b>	<b>(11.1)</b>	<b>(6.5)</b>	<b>(37.0)</b>
Common Share Dividends	0.0	0.0	0.0	0.0
Equity Financing	1.6	17.1	0.0	34.3
Debt Issue	30.0	0.2	0.0	20.0
Debt Repayment	0.3	(3.5)	(4.6)	(15.2)
Other	(13.0)	(2.6)	0.0	0.0
<b>Financing Cash Flow</b>	<b>18.9</b>	<b>11.2</b>	<b>(4.6)</b>	<b>39.1</b>
<b>Net Change in Cash</b>	<b>(21.3)</b>	<b>(2.2)</b>	<b>2.3</b>	<b>10.1</b>
<b>Cash Balance</b>	<b>3.8</b>	<b>9.6</b>	<b>12.0</b>	<b>22.1</b>
<b>Free Cash Flow</b>	<b>(39.8)</b>	<b>(12.5)</b>	<b>2.1</b>	<b>(29.0)</b>

VALUATION DATA				
Year-end June	2016A	2017A	2018A	2019E
P/E	--	--	--	0.02x
P/CF	--	--	2.99x	5.09x
EV/EBITDA	--	--	32.62x	4.80x
FCF Yield	--	--	5.09%	--

INPUT PRICES				
	2016A	2017A	2018A	2019E
Eight Capital Spot Uranium (US\$/l)	33	23	29	35
Uranium Realized Price (US\$/lb)	64	68	47	54
Exchange (US\$/A\$)	0.79	1.00	1.00	1.00

**Peninsula Energy Ltd.**

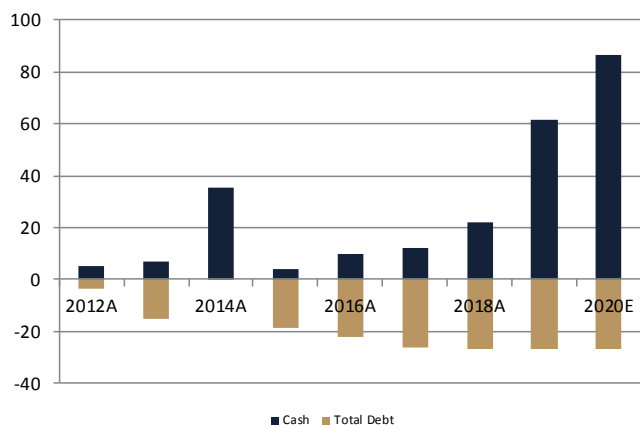
**Net Asset Valuation at Eight Capital Price Deck (US\$)**

	Target Setting NAV		
	Discount Rate	(\$MM)	(\$/Share)
<b>Uranium Assets</b>			
Lance (100%)	10%	103	0.44
<b>Total Uranium Assets</b>		<b>103</b>	<b>0.44</b>
<b>Other Assets &amp; Expenses</b>			
Cash		22	0.10
Debt		(27)	(0.12)
Resources		18	0.08
Exploration, G&A, Other	10%	(9)	(0.04)
<b>Net Other Assets</b>		<b>5</b>	<b>0.02</b>
<b>Net Asset Value</b>		<b>108</b>	<b>0.47</b>
<b>Share Price</b>			<b>0.17</b>
<b>P/NAV</b>			<b>0.37x</b>

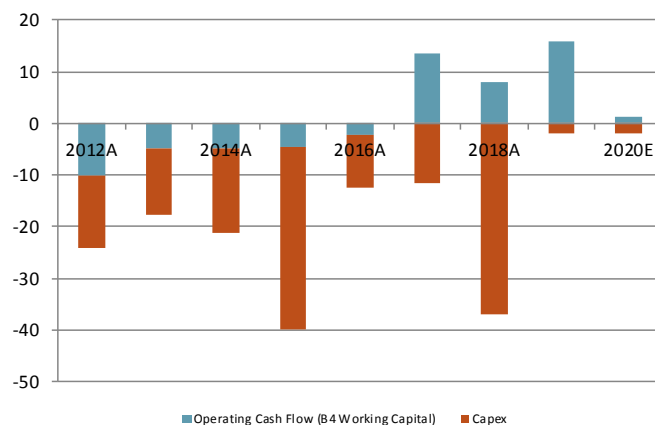
	NAV at Various Discount Rates					
	0%		5%		15%	
	(\$MM)	(\$/Share)	(\$MM)	(\$/Share)	(\$MM)	(\$/Share)
	216	0.93	147	0.64	74	0.32
	<b>216</b>	<b>0.93</b>	<b>147</b>	<b>0.64</b>	<b>74</b>	<b>0.32</b>
	22	0.10	22	0.10	22	0.10
	(27)	(0.12)	(27)	(0.12)	(27)	(0.12)
	18	0.08	18	0.08	18	0.08
	(6)	-0.03	(10)	-0.04	(6)	(0.03)
	<b>7</b>	<b>0.03</b>	<b>3</b>	<b>0.01</b>	<b>7</b>	<b>0.03</b>
	<b>223</b>	<b>0.96</b>	<b>150</b>	<b>0.65</b>	<b>82</b>	<b>0.35</b>
		<b>0.17</b>		<b>0.17</b>		<b>0.17</b>
		<b>0.18x</b>		<b>0.26x</b>		<b>0.48x</b>

**Financial Forecasts at Eight Capital Price Deck (MM A\$)**

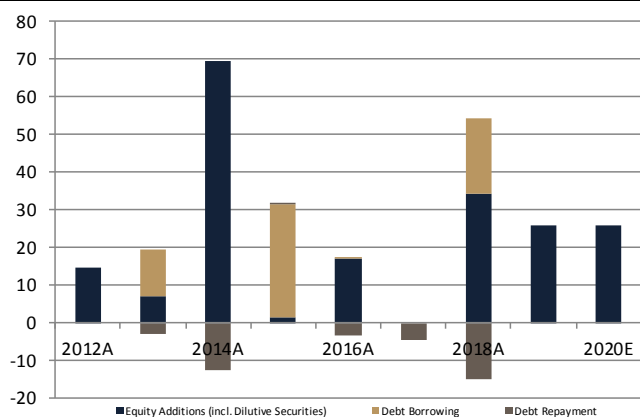
**Cash and Debt**



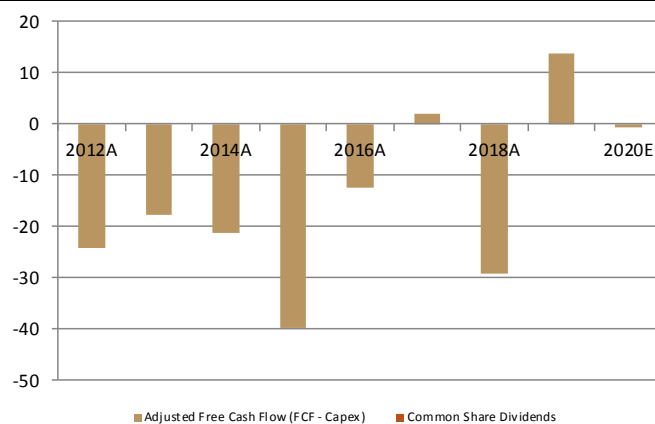
**Operating Cash Flow and Capital Spending**



**Changes in Debt and Equity**



**Free Cash Flow and Common Share Dividends**



Source: FactSet, Eight Capital, Company Reports

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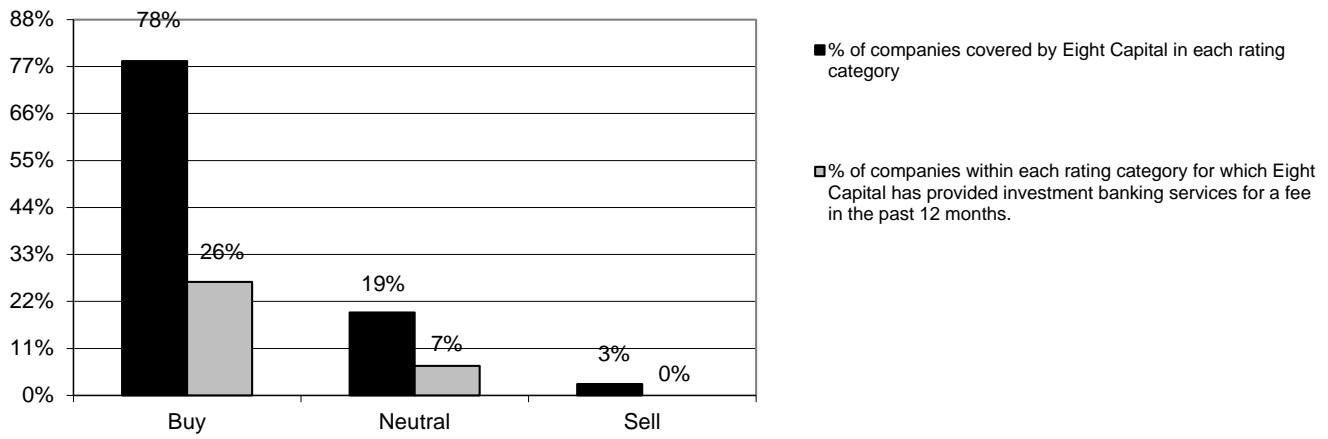
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*As at December 31, 2018*  
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